

Fig. 1

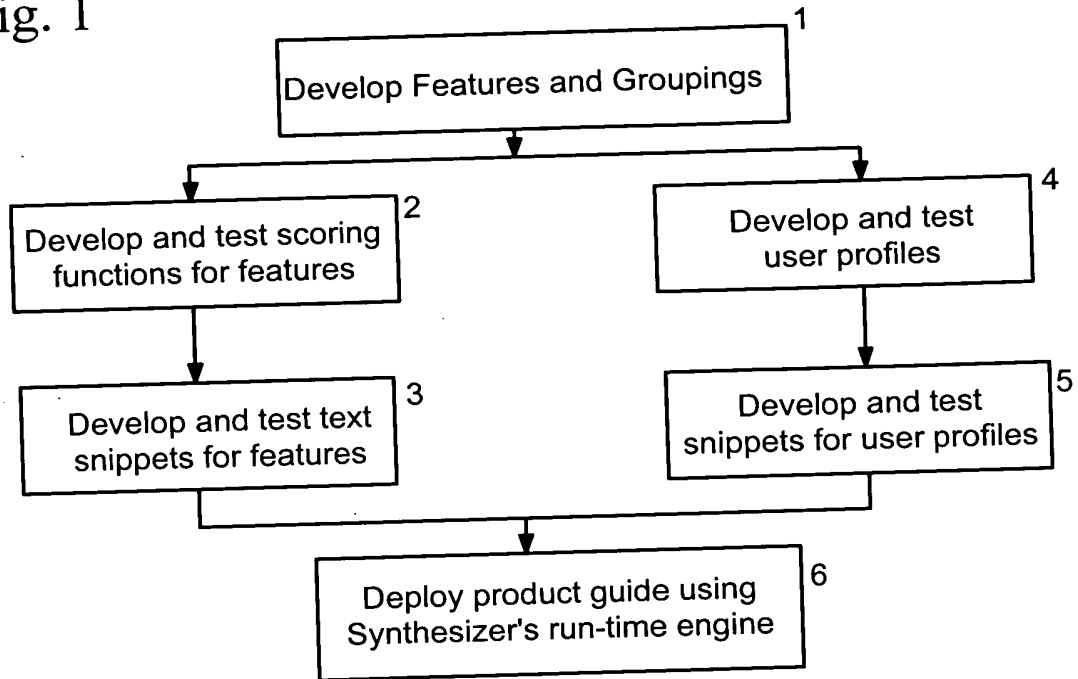


Fig. 2

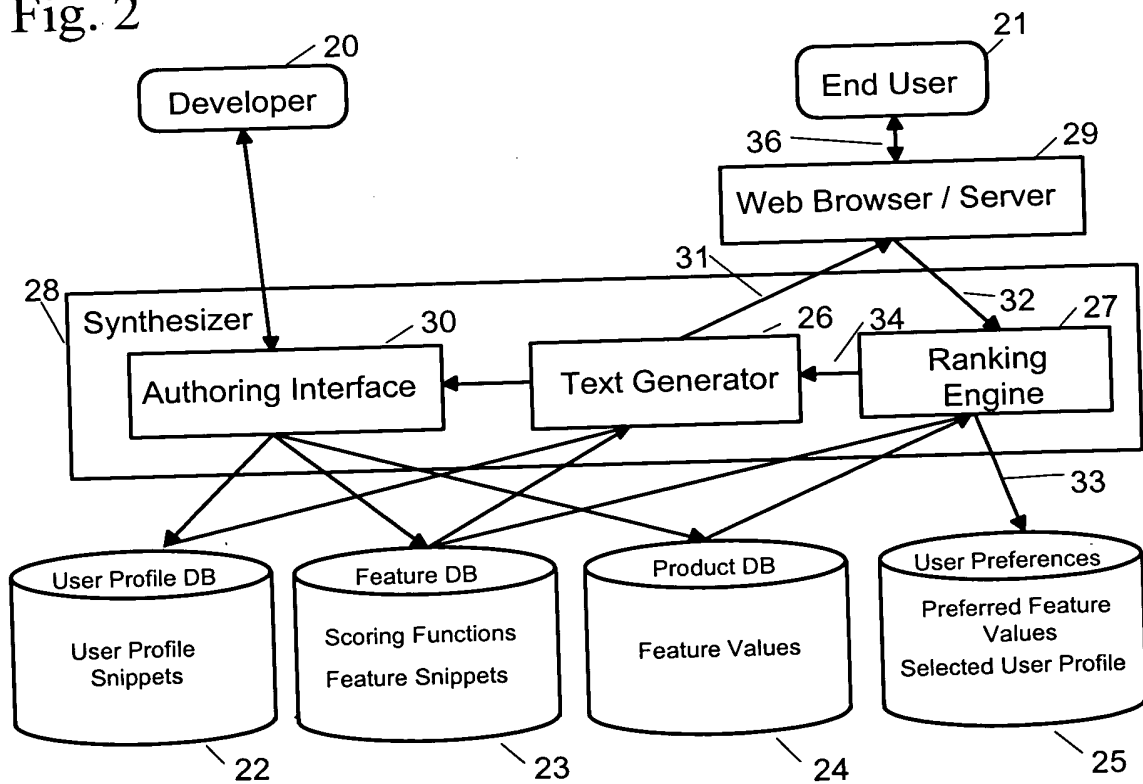


Fig. 3a

```

procedure SummarizeTopProduct
  let u = current user profile
  let p = product with top ranking (according to u)
  output "The top overall pick is"
  (or randomly-selected synonymous generic phrase)
  output brand(p), model(p)
  output "."
  do DescribeMostImportantAndTopRatedFeatures(p,u)
end procedure

procedure DescribeMostImportantAndTopRatedFeatures( Product p,
  UserProfile u )
  let topRatedAndMostImportantFeatures =
    list of category features cf such that
      IsTopRatedFeature(cf,p) = true and
      IsMostImportantFeature(cf,u) = true
  let topRatedButNotImportantFeatures =
    list of category features cf such that
      IsTopRatedFeature(cf,p) = true but
      IsMostImportantFeature(cf,u) = false
  let importantButNotTopRatedFeatures =
    list of category features cf such that
      IsTopRatedFeature(cf,p) = false but
      IsMostImportantFeature(cf,u) = true
  if topRatedAndMostImportantFeatures is not empty
    output "It has"
    for each cf in topRatedAndMostImportantFeatures, output
      getSuperlativeSnippet(cf)
    output ", which"
    output getAssertImportantSnippet(u)
    output "."
    end if
  if importantButNotTopRatedFeatures is not empty
    output "It has lower ratings in"
    for each cf in importantButNotTopRatedFeatures, output
      getFeatureLabel(cf)
    output ", which"
    output getAssertAlsoImportantSnippet(u)
    output "."
    end if
  if topRatedButNotImportantFeatures is not empty
    output ", but has high scores in"
    for each cf in topRatedButNotImportantFeatures, output
      getFeatureLabel(cf)
    output "."
    end if
end procedure

```

Fig. 3b

```
function IsTopRatedFeature( CategoryFeature cf, Product p )  
    if p's ranking on cf is in top 2 rankings for p,  
        return true  
    else return false  
end function
```

```
function IsMostImportantFeature( CategoryFeature cf, User u )  
    if u's weighting of cf is in top 2 weightings for u,  
        return true  
    else return false  
end function
```